

ABSTRACT OF THE DISCLOSURE

A dual damascene interconnect structure, produced using etch chemistry based on $C_2H_2F_4$, includes (i) an etch stop layer of either undoped silicon oxide or doped silicon oxide, and (ii) dielectric layers both above and below the etch stop layer of the other (i.e., when the etch stop layer comprises undoped silicon oxide, the dielectric layers above and below the etch stop layer independently comprise a doped silicon oxide; and when the etch stop layer comprises doped silicon oxide, the dielectric layers above and below the etch stop layer independently comprise an undoped silicon oxide).